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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,754	09/23/2003	Scott R. Culler	59039US002	1788
32692	7590	04/07/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			MARCHESCHI, MICHAEL A	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



The amendment filed 1/30/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The new matter added to the specification is the description of figure 1, as amended on page 4, line 10, to read “Figure 1 is a cross section view, enlarged of a **prior art structured abrasive article**” and the designation of Figures 1-3 as prior art because the specification, as originally filed clearly defined Figure 1 as an article embodiment of the instant invention . In addition, page 5, lines 19-20 and page 14, line 5-6 (which describe this figure in detail) set forth that “it is also within the scope of the (instant) invention”, thus this clearly implies that figure 1 is intended to be an embodiment of the instant invention. Changing the figure description to “prior art” is thus new matter because the original specification clearly defined that this figure in an embodiment of the instant invention and applicants have not provide clear basis for this change. Figures 2-3 are defined as a process for making the article of figure (see page 4, lines 12-13), thus the designation of these Figures as prior art is new matter for the same reasons above for Figure 1.

The drawings are objected to because now Figures 1-3, as amended, set forth that these figures are the description of the prior art. However, the specification and the figures, as originally filed, clearly defined these to be embodiments of the instant invention . In addition, page 5, lines 19-20 and page 14, line 5-6 (which describe this figure in detail) set forth that “it is also within the scope of the (instant) invention”, thus this clearly implies that figure 1 is intended

to be an embodiment of the instant invention. Changing the figure description to “prior art” is thus objected to because the original specification clearly defined that this figure in an embodiment of the instant invention and applicants have not provide clear basis for this change. Figures 2-3 are defined as a process for making the article of figure (see page 4, lines 12-13), thus these figures are objected to for the same reasons above for Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 1-14 and 16-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains,

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or with which it is most nearly connected, to make and/or use the invention. The instant specification defined two processes (Figures 2-3) which are used to make the claimed article. The amendments to these process now define them as being “prior art” process, thus any processes defined in the instant invention are **prior art** process. In view of this (amendments), the instant specification never clearly defines how to make the claimed abrasive articles. The claims contains subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention. In other words, the specification, as amended, defines what the prior art processes involve for making the prior art coated abrasive of Figure 1 but do not define how to make the inventive coated abrasive article. The examiner is unclear as to applicant amendment to the Figures and these amendments to the drawings now do not enable the specification.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14 and 16-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The new matter added to the claims is the limitation “and is not co-linear to the third side”, as defined in the independent claims, because the examiner can not find clear support for this limitation and applicants provide no teaching of where support can be found in the original specification.

In addition, the new matter added to the claims is the limitation “a third side extending between the first side and the second side”, as defined in the independent claims, because the examiner can not find clear support for this limitation and applicants provide no teaching of where support can be found in the original specification. Although the figures imply a third side, this side is shown as a parameter and the limitation “extending between” is not limited to the third side defining a parameter. “Extending between” implies that the third side can be anywhere between the first and second side and is not necessarily a parameter. Any third side in the original figures is clearly a parameter, thus the limitation, as written, is not fully supported by the disclosure, as originally filed.

If the examiner is in error, it is suggested that applicants provide clear support where said limitations can be found in the original specification.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 5-7, 9, 11, 13-14, 16-17, 20-22, 24, 26, 28-31, 34-36, 38, 40, 42-45, 48-50, 52, 54 and 56-57 are rejected under 35 U.S.C. 102(b) as anticipated by Pieper et al. (5,152,917), as evidenced by Naujok (6,761,620) and Flood et al. (5,484,330) or, in the alternative, under 35

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U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Naujok (6,761,620) and Flood et al. (5,484,330).

Naujok (6,761,620) shows in figure 3 that saw tooth shapes includes embodiments wherein the distal region is not on a plane orthogonal to the base.

Flood et al. (5,484,330) shows in figure 1 that saw tooth shapes includes embodiments wherein the distal region is not on a plane orthogonal to the base.

The teachings and characterization of Pieper et al. are defined in the previous office action for the same reasons set forth therein which are incorporated herein by reference. In addition to the reasons defined in the previous office action, Pieper et al. discloses abrasive array of protruding units of saw toothed shaped composites (distal linear apex for each unit, when projected onto a plane with its respective base, extend between non-central points on opposite first and second sides). The saw tooth shapes of the primary reference does not necessarily mean the side is 90 degrees or orthogonal to the base.. These saw tooth shapes, as disclosed by Pieper et al., are not limited to any particular form and thus it is the examiners position that these read on the claimed saw tooth shape that includes embodiments wherein the distal region is not on a plane orthogonal to the base, as is evidenced by the secondary references.

In the alternative, the 2 secondary reference clearly discloses that saw tooth shapes includes embodiments wherein the distal region is not on a plane orthogonal to the base. One skilled in the art would have appreciated and found obvious that since this is a general structure of a saw tooth, the saw tooth shape of the primary reference could necessarily encompass features that read on the claims (distal region is not on a plane orthogonal to the base). The saw toothed shapes of the primary reference does not necessarily mean the side is 90 degrees or



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orthogonal to the base. These saw tooth shapes, as disclosed by Pieper et al., are not limited to any particular form and thus it is the examiners position that these make obvious the claimed saw tooth shape that includes embodiments wherein the distal region is not on a plane orthogonal to the base, as is clearly depicted by the secondary references. This is apparent because saw tooth shapes are generally not orthogonal to the base, as shown by the secondary references.

Applicants show no evidence that the saw tooth shapes of the primary reference mean the side is 90 degrees or orthogonal to the base.

Claims 3, 4, 8, 10, 12, 18, 19, 23, 25, 27, 32, 33, 37, 39, 41, 46, 47, 51, 53 and 55 are rejected under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Naujok (6,761,620) and Flood et al. (5,484,330).

The teachings and characterization of Pieper et al. are defined in the previous office action (and above) for the same reasons set forth therein which are incorporated herein by reference. The reasons for combining the references is defined in the above rejection.

Claims 1, 2, 5-7, 9, 11, 13-14, 16-17, 20-22, 24, 26, 28-31, 34-36, 38, 40, 42-45, 48-50, 52, 54 and 56-57 are rejected under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Kaisaki et al. (cited on IDS of 3/30/06) or Adefris et al. (cited on IDS of 3/30/06).

Kaisaki et al. teaches in column 5, lines 32-35 and column 24, lines 45-60 that composites having a taper rather than a 90 degree relative to the backing (or base) result in improved composites with respect to removal from the production tool.



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Adefris et al. teaches in column 5, lines 20+ that composites having a taper rather than a 90 degree relative to the backing (or base) result in improved composites with respect to removal from the production tool and aid in controlled break down of the abrasive composite during use..

The teachings and characterization of Pieper et al. are defined in the previous office action for the same reasons set forth therein which are incorporated herein by reference. In addition, to the reasons defined in the previous office action, Pieper et al. discloses abrasive array of protruding units of saw toothed shaped composites (distal linear apex for each unit, when projected onto a plane with its respective base, extend between non-central points on opposite first and second sides). It is the examiners position that it would have been obvious to have a taper between the distal region and the base of the saw tooth composite of the primary reference because the secondary references teach benefits of such a taper, said benefits providing the necessary motivation for the combination, as applied.

Claims 3, 4, 8, 10, 12, 18, 19, 23, 25, 27, 32, 33, 37, 39, 41, 46, 47, 51, 53 and 55 are rejected under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Kaisaki et al. (cited on IDS of 3/30/06) or Adefris et al. (cited on IDS of 3/30/06).

The teachings and characterization of Pieper et al. are defined in the previous office action (and above) for the same reasons set forth therein which are incorporated herein by reference. The reasons for combining the references is defined in the above rejection.

Applicant's arguments with respect to all the claims have been considered but are moot in view of the new ground(s) of rejection, however, the examiner will comment on applicants remarks based on Pieper et al.

Applicants state that Figure 9 of Pieper et al. has a distal region that is positioned 90 degrees or orthogonal to the base. The examiner is unclear as to where this is defined in the reference and how applicants came to this conclusion.

Applicants also argue that this reference does not teach a two by two array (both figures 8 and 9 define arrays that are one unit deep (thus not a 2 by 2 array, at least). This argument is not persuasive because since Fig. 9 is a side view of a segment of the abrasive article, and the article as further evident and disclosed by Fig. 8, includes more than one array of protruding units, which meets at least two-by-two array of protruding units' as defined by specification as originally filed. Further Pieper et al. discloses in column 8, lines 16-20 and column 8, lines 35-38 that the shape and periods or number of composites per unit area is varied depending upon the abrading applications. Fig. 18 also discloses at least two by two arrays. In view of this, the reference when taken as a whole, clearly teaches or suggests (reads on) a two-by-two array

Applicants also argue that Figure 9 of Pieper et al. has a distal region that is positioned 90 degrees (orthogonal) to the base. This is not persuasive because, as defined above, the examiner is unclear as to where this is defined in the reference and how applicants came to this conclusion. Are applicants stating that the angle is a perfect 90 degrees. If so, where is this defined? Even if the reference angle is 89.9 degrees it would read on the claimed invention. In addition, this is also not persuasive because, as defined in the rejection, , a saw tooth shape does not necessarily

mean a distal region orthogonal to the base, as evident by secondary references. Finally, the above rejection relies on evidence reference which are not new and thus not argued.

With respect to the arguments of Figure 18 as not disclosing the claimed invention, the examiner agrees and withdraws any comment previously defined that claim 18 defined the claimed structure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. In addition, applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 3/30/06 prompted the new ground(s) of rejection presented. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a) and MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

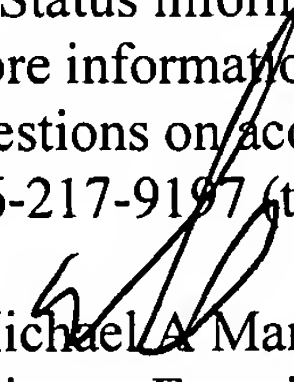
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-12331233. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300

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MM

  
Michael A. Marcheschi  
Primary Examiner  
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